

REMARKS

As presented earlier, there is only one independent claim, claim 1. For reasons set forth below, it is believed that this independent claim is allowable. With such allowance, the remaining claims depending therefrom are inherently also allowable.

It is noted that the earlier objections to the drawings, specification and claims have been withdrawn. Furthermore, it is noted that the response previously filed was successful in overcoming the then outstanding rejections. To the extent applicable, certain arguments made in the previous response with respect to the teachings of the prior art and the differences between the present invention and the prior art are incorporated herein as no amendments to the claims have been made in the present response.

The focus of this response will be directed to allowability of claim 1. This focus will simplify the issues presented and thereby obviate further work and analysis by the Examiner. Accordingly, entry of the present response and allowance of not only independent claim 1 but also each of the remaining dependent claims is respectfully urged.

Claims 1, 4-6, 8-12, 14, 20, 39-40 and 45 have been rejected as describing subject matter obvious over certain teachings contained in the Yoshikawa published application ('170 application) in view of further teachings contained in the Takala patent ('294 patent). Before proceeding with a discussion of this rejection, it may be well to briefly review the extent of the pertinent teachings in each of the '170 application and the '294 patent.

The Examiner admits that the '170 application does not teach "an electrically conductive medium". The '170 application discloses a number of insulator layers/surfaces including a transparent hard coating applied to a surface of an operation panel (3) (see paragraph 0052) and a piezoelectric substrate (2) (see paragraph 0058). It is alleged that these two layers/surfaces disclose "a medium proximal to said conductors to concentrate electric field between conductors toward the plane of the supporting medium and adapted to locally modify the capacitive environment between a subset of the conductors without distortion of the conductive medium". It is respectfully submitted that this conclusion is not warranted because the transparent hard coating agent is made of an insulating material (see paragraph 0052). Therefore, it cannot concentrate electric field between the conductors as defined in claim 1. The Examiner refers to a voltage pulse (see paragraph 0051) that allegedly relates to a conductive medium to concentrate the electric field. This voltage pulse is provided by a stylus pen and is not at all related to a medium that can concentrate an electric field between conductors and towards the plane of the supporting medium, as set forth in claim 1. It is alleged that the piezoelectric substrate can produce large strains and can be actuated at a low voltage and it is implied that this feature is

relevant to a medium that is adapted to locally modify the capacitive environment between the subset of the conductors. This cannot be so. The piezoelectric substrate is a thin plate extending in the X direction along a side of the digitizing tablet (as shown in Figure 1). The purpose of the piezoelectric substrate is that of causing each support substrate (4) to vibrate. It is impossible for the piezoelectric substrate to modify the capacitative environment between a subset of conductors as disclosed and claimed nor can it concentrate an electric field between the conductors towards the plane of the supporting medium.

One must therefore come to the inevitable conclusion that neither the transparent hard coating of insulating material nor the piezoelectric substrate nor any other layer or surface disclosed in the '170 application can provide a medium to concentrate the electric field between conductor toward the plane of the supporting medium and adapted to locally modify the capacitive environment between a subset of the conductors.

The '294 patent is directed to a device and method for implementing a key in which a field applied to a layer formed of a material whose volume is responsive to the magnitude of the field is altered at a specific position to create a key at such position. That is, the volume of the key is responsive to the magnitude of the field whereby the key can be operated by relying on a sense of touch. There is no teaching which either relates to or discloses capacitive touch pads, the subject for the present invention. It is therefore highly questionable whether one skilled in the art would even consider the teachings set forth in the '294 patent when contemplating

modification of the structure and operation disclosed in the ‘170 application.

Even if the ‘294 patent were considered by one skilled in the art, such consideration would be irrelevant since it does not disclose the admittedly missing teachings in the ‘170 application of an “electrically conducted medium proximal to said conductors to concentrate electric field between conductors toward the plane of the supporting medium and adapted to locally modify the capacitive environment between a subset of the conductors without distortion of the conductive medium”.

It is further argued by the Examiner that the disclosure set forth in column 3, line 60-61 and column 4, lines 5-9 in combination with layer 16 shown in Figure 1 are relevant to the present invention. Such relevance is believed not to exist. In particular, layer 16 is an elasto resistive (ER) layer of a material having an electrical conductivity that is responsive to pressure (see column 6, lines 22-24). The ER layer is used for detecting a press and/or touch and determining its position on the surface on the layered key element (see column 6, lines 24-27). Thus, layer 16 is configured to detect a touch resulting in a change in electrical connectivity; this is not the same as the electrically conductive medium recited in claim 1. Moreover, the disclosure set forth in column 3, lines 60-61 and column 4, lines 5-9 relates to a layer of material having an electrical conductivity that is responsive to pressure; this is not and cannot be construed as the electrically conducted medium recited in claim 1.

It is therefore respectfully submitted that neither the ‘170 application nor the ‘234 patent discloses nor teaches toward an electrically conducted medium to concentrate electric field between conductors toward the supporting medium and adapted to locally modify the capacity environment between a subset of the conductors without distortion of the conductive medium. As admitted by the Examiner, the ‘170 application does not disclose the conductive medium and therefore cannot provide any properties in relation to capacitance or concentration of electric field. Furthermore, the ‘234 patent does not relate to capacitive touch pads and therefore any electrically conductive media disclosed therein do not concentrate electric fields or modify a capacitive environment. One must therefore come to the inevitable conclusion that neither the ‘170 application or the ‘234 patent discloses nor teaches the subject matter recited in independent claim 1. Withdrawal of the rejection of this claim is respectfully requested and upon such withdrawal, the rejections of the remaining dependent claims must be withdrawn.

In view of the detailed analysis of the primary reference cited in support of the outstanding rejection of claim 1, the correlation of the absence of teachings therein pertinent to the recitations contained in the independent claim and the residence of the ‘234 patent in a

field different than the present invention or the '170 application in combination with its failure to supply the teaching missing in the '170 application, it is believed that the application is in condition for allowance, which allowance is respectfully requested.

Respectfully submitted,

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